The Bulletins are published weekly throughout the school year (thirty issues) to aid teachers and students in keeping abreast of geography behind current news events.

GEOGRAPHIC SCHOOL BULLETINS

of

The National Geographic Society

WASHINGTON 6, D. C.

The National Geographic Society is a non-profit educational and scientific Society established for the increase of geographic knowledge and its popular diffusion.

VOLUME XXVI — February 9, 1948 — NUMBER 17

1. Ruhr, Production Giant, Is Midget in Area Aikman - Gray
2. Yap Battered by Three Months of Storms W. K. Moore
3. U. S. Reopens Base on "Shores of Tripoli" Aikman
4. Barnacles Burden Hulls, Slow World Shipping Hoopes - Gray
5. Korea's Wait for Freedom a Restless Period Aikman - Stubbs

WILLARD PRICE

YAP "DOLLARS," TRULY OF CARTWHEEL SIZE, "STAY PUT" EVEN WHEN THEY CHANGE HANDS

Such stone money represents village wealth on Yap in much the same way that the Fort Knox gold represents American wealth. The calcite coins are scattered in groups over the four Pacific islands (Bulletin No. 2), but everyone knows which village owns each stone. When a deal is made, the money remains untouched, but again everyone knows it now belongs to another village.

Bulletin No. 1, February 9, 1948

Ruhr, Production Giant, Is Midget in Area

WORKERS' strikes have slowed down production in the Ruhr district, a small area whose enormous coal wealth and industrial development have made it one of the Old World's key spots.

The area straddles and takes its name from the small and winding Ruhr River in northwest Germany, near the junction with the Rhine. The main stretch of the Ruhr is only 40 miles long, yet it contains Europe's outstanding concentration of mines, mills, power plants, manufacturing centers, canals, and railways. The entire district lies within the British occupation zone.

Continuous Chain of Industry

Such familiar industrial names as Essen, Dortmund, Bochum, and Gelsenkirchen are reminders that the Ruhr was Europe's peacetime workshop. Its cities held nearly 5,000,000 people. As Germany's chief arsenal and laboratory in World War II, the region was a major objective of Allied bombing, from which it still bears the marks (illustration, next page).

Smoking by day, flaming by night, the Ruhr in action formed an almost continuous chain of blast furnaces, foundries, chemical plants, railway shops, and mining works. At the end of the chain, where the Ruhr River meets the Rhine, stands Duisburg—Europe's leading river port. Its annual prewar tonnage rivaled that of many great seaports.

Iron Ore Mined on Spot

The coal mines of this flat "black country" accounted for three-quarters of Germany's total production before the war. With the largest known reserves of continental Europe, the fields have been worked for six centuries. Normal output during the late 1930's was more than 100,000,000 tons a year, feeding not only domestic industries but those in neighboring and distant countries as well.

Much of the iron ore consumed in Ruhr factories also has been mined in the vicinity, a valuable supplement to imports from France and Sweden. After coal mining, iron and steel make the second industry of the region. In normal times, it was an important factor in meeting Europe's heavy-industry needs.

Synthetics from Coal

In 1938, rolled steel produced in the Ruhr nearly equalled that of the remainder of Europe, with the exception of Russia and England. Tools, engines, farm implements, ship frames, bridge steel, and locomotives and other railway equipment, along with safety pins and roller skates, all figured in the district's output lists.

On its vast and convenient coal deposits Germany based an extensive synthetics program, to make up for such lacks as natural oil and rubber.

ENTERED AS SECOND-CLASS MATTER APRIL 27, 1943, POST OFFICE, WASHINGTON, D. C., UNDER ACT OF MARCH 3, 1879.
COPYRIGHT, 1948, BY THE NATIONAL GEOGRAPHIC SOCIETY. INTERNATIONAL COPYRIGHT SECURED. ALL RIGHTS RESERVED.
SUBSCRIPTION TWENTY-FIVE CENTS FOR THIRTY WEEKLY ISSUES DURING THE SCHOOL YEAR. IN CANADA, FIFTY CENTS.

FREDERICK L. HAMILTON FROM THREE LIONS

EVERY DAY IS WASHDAY IN KOREA, AND METHODS AND EQUIPMENT REMAIN OLD STYLE

Loose sleeves of her short jacket tied back out of the way, this housewife carries a heavy pottery water jar on her neatly combed head. No modern water supply lightens her interminable job of keeping white clothes white in accordance with a tradition of old Korea (Bulletin No. 5).

Bulletin No. 2, February 9, 1948

Yap Battered by Three Months of Storms

YAP, strategic island group in the western Carolines, has been getting an overdose of punishment from the violent weather which the Pacific can conjure up with seemingly no provocation.

Since shortly before Christmas, Yap has been lashed by five destructive typhoons, two great tidal waves, and a rampaging windstorm reaching a velocity of 100 miles an hour.

United States Navy in Charge

W. Robert Moore, of the Foreign Staff, National Geographic Society, reports that the first November typhoon ripped roofs off warehouses and smashed in walls of some quarters occupied by American families and naval personnel in Yap Town, administrative headquarters for the islands.

The United States Navy, which has the duty of local civil administration, flew in emergency supplies, tents, and other materials. Now, not only the housing and food supplies of the American colony have been ruined, but wind and waves also have destroyed coconut trees and taro beds on which the 3,000 natives depend for their living.

The four closely set islands, collectively known as Yap, form one of the most individual land spots in the former Japanese mandated islands, now under United States administration as Trust Territory.

During the Spanish, German, and Japanese regimes, foreigners had little influence on the natives of Yap. The islanders cling to old customs. They still dress simply in loincloths and grass skirts and live largely by their own production.

Their food sources are coconut plantations, breadfruit, bananas, and taro patches. Fish are caught in traps built on the surrounding reefs or in the lagoons among the islands.

Stone-Money Land

Virtually every adult, and even many youngsters chew betel nut, a concoction of the nut from the areca palm, a pepper leaf, and white lime derived from burning coral. The mixture stains the saliva blood red, and its constant use turns the teeth reddish-black.

Yap is often called the "Land of Stone Money" because of the large cartwheels of calcite brought on hazardous voyages by outrigger canoe from the Palau Islands about 250 miles away. These "coins" range from a foot to 12 feet in diameter.

Actually these circular slabs of rock are not money, but symbols of wealth (illustration, cover). Some villages boast scores of them. Shells, likewise brought in from other islands, are still used as local "change," but for purchases of cigarettes and other imported supplies, American money is essential.

Thatched homes and buildings (illustration, next page) of the native population are scattered around the shores of the islands. As a consequence, the recent flooding waves caused widespread damage both to houses and adjoining gardens. It is reported that buds and young coconuts were

UMI

High-octane gas, plastics, rayon, dyes, pharmaceuticals, film, and textiles were among other important Ruhr products.

The Ruhr's productive might makes it a pawn in big-power politics as well as a prime factor in Europe's economic recovery. Many suggestions concerning the district's future have been made, including one that it should be internationalized. The most recent change links it (and the rest of the British zone) with the American occupation zone in an economic union called Bizonia.

NOTE: The Ruhr may be located on the National Geographic Society's map of Germany and Its Approaches. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

For additional information, see "What I Saw Across the Rhine," in the *National Geographic Magazine*, January, 1947; "War's Wake in the Rhineland," July, 1945*; and "Americans Help Liberated Europe Live Again," June, 1945. *(Issues marked with an asterisk are included on a special list of Magazines available to teachers in packets of ten for $1.00.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, January 10, 1947, "Americans and British Merge German Zones."

U. S. ARMY AIR FORCES, OFFICIAL

WESEL, A SMALL RUHR CITY, NEARLY WAS BOMBED INTO THE GERMAN EARTH DURING WORLD WAR II

Thirty-eight miles from the Netherlands border, at the junction of the Lippe and Rhine rivers, bomb-pocked Wesel was once a strategic defense point for Hitler. The Ruhr Valley, center of Europe's greatest industrial region, lies a few miles south.

Bulletin No. 3, February 9, 1948

U. S. Reopens Base on "Shores of Tripoli"

REOPENING of the American air base near Tripoli in the former Italian colony of Libia brings back a spot of Yankee khaki to an oasis and desert land whose long and turbulent history already includes dramatic chapters written by United States military forces.

One hundred and thirty-eight years before the North African campaigns of World War II, United States naval vessels were in action in Tripoli harbor, while a straggling auxiliary army led by Americans trudged overland toward the city from Egypt.

Tripoli a City of White Buildings

Out of the conflict, which followed the American refusal to continue paying annual tribute to the Barbary pirates, the United States Marines took a line—"to the shores of Tripoli"—for their stirring service anthem. Lieutenant Stephen Decatur was the hero of the battles and blockade of the port of Tripoli.

Beyond the beaches of northwest Libia, the city of Tripoli (illustration, next page) rises against Africa's blue skies in a jumble of white buildings, shadowed by the feathery green of palm and fruit trees.

Tripoli is just south of Italy, across the Mediterranean, and southwest of Greece. From the American flying field of Mellaha, outside the city, the hop to Athens is about 700 miles.

The capital and the largest city of Libia, Tripoli has more than 100,000 inhabitants. Its Moslem mosques and Christian cathedral, its rambling Old Quarter, and the substantial European structures of the new, hint at the story of the diverse peoples and cultures meeting there.

A Tripoli crowd, halted for a passing automobile, donkey, or camel, may, for example, include a British, French, or Turkish army officer, an Italian peasant from a near-by farm, or a Greek fisherman.

Memories of Fascist Regime

In the group may be an Italian housewife, an Arab merchant shuffling along in his soft heelless shoes, a Negro caravan driver from the hills, a Moslem woman concealing her face behind folds of her great cloak, or a native soldier in dashing blue jacket and white trousers thrust into high red boots.

Before the Axis defeat in North Africa brought in waves of Allied troops, the Tripoli street scene often was dominated by fascist militiamen in their black shirts and tasseled caps, or Italian officers wearing thigh-slapping swords and silver-buttoned tunics.

Around Tripoli spreads one of the most extensive oasis belts of the country. Oranges and lemons, pomegranates, almonds, and apricots thrive, along with olive groves, vineyards, and fields of wheat and barley.

The market held weekly in the suburbs near the American airfield is a popular show place for color and variety. Also in the neighborhood—but already receding into history like the scattered Roman ruins that dot the North African sands—is Mussolini's abandoned auto-racing course.

UMI

blown off at least 60 per cent of the trees, so that the native folk will suffer a food shortage for at least six months.

The United States government first took official interest in Yap after World War I, when the Japanese had occupied all German possessions in Micronesia. The United States challenged Japan's right to maintain exclusive control over Yap, then a Pacific cable station. At that time many legislators could not see the necessity of involving the nation over a faraway island of "grass skirts and stone money," so the claim was dropped.

The Germans changed Yap's topography during their rule, preceding World War I. They supervised the building of the Tageren Canal, which cuts the main island of Yap in two and allows shallow-draft vessels to pass through to the central lagoon between Yap and the islands of Map and Rumung. This canal is still in service, as are several stone paths and lagoon-crossing causeways that the Germans built.

NOTE: Yap is shown in a large-scale inset on the Society's map of the Pacific Ocean and the Bay of Bengal.

For further information, see "American Pathfinders of the Pacific," in the May, 1946, issue of the *National Geographic Magazine;* "South from Saipan," April, 1945*; "Hidden Key to the Pacific," June, 1942*; and "Mysterious Micronesia," April 1936.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, March 17, 1947, "U. S. Asks Trusteeship over Pacific Islands."

WILLARD PRICE

IN THEIR VILLAGE CLUBHOUSE, YAP MEN HOLD COUNCIL AND PERFORM DANCES

When they "take dinner at the club," they have to prepare it themselves because women are tabu in the "All Men House." The structure is built on a rock platform jutting into a lagoon. The bamboo floor and walls are lashed to the palm-log pillars and rafters by coconut-husk cords. No nails are used. In one of their ceremonial dances, the men crawl and writhe on the floor like lizards, in imitation of a Yap reptile. The Japanese dismantled most of these houses for their timbers.

Bulletin No. 4, February 9, 1948

Barnacles Burden Hulls, Slow World Shipping

BARNACLES show no respect for sensitive ocean-exploring instruments, say scientists who made the last 12 months a record year for study of submarine contours and oozes.

Despite man's progress in devising poisonous hull paints and solutions, these glue-headed cousins of the lobster continue to slow down shipping in the seven seas. The annual cost of scraping barnacles from the bottom of the United States shipping fleet has been reckoned at a hundred million dollars.

Lepas Is Barnacle Bill, the Sailor

Some 200 barnacle species inhabit the oceans. Favoring the warmer waters, they line pilings, logs, and rocks up to hightide level. They even attach themselves to whales (illustration, next page). Floating hulls enable them to live constantly at the best level for feeding on plankton—the ocean's microscopic plant and animal life. Some lead dizzy lives attached to ship propellers.

In general, the acorn-shell varieties "latch on" to coastline bulwarks, while the finger-shaped *Lepas*, fastening to ships, is Barnacle Bill, the sailor. In a year's time *Lepas* can burden a 10,000-ton ship hull with 30 tons of speed-reducing weight. Barnacle population density reaches 500 a square foot.

Big vessels have carried several hundred tons in barnacles when brought into drydock for the periodic cleaning required by maritime law. This terrific drag slows a ship's speed by half.

To lessen the damage to wooden hulls, pitch and copper sheathing have long been used to good effect. On steel ships, newly developed anti-fouling paints containing copper and mercury compounds are extremely distasteful to the pestiferous creatures. The best of these paints kept American ships barnacle-clear for two or three years during the war. DDT solutions have been used with some small effect.

World-cruise Ships Return with Mementos of All Waters

The ship barnacle spends its first weeks of life swimming and seeking. When once it has found the anchorage of its choice, it "heads to" securely with its own lime cement. Losing its eyes and its powers of locomotion, it combs the water with six pairs of fringed limbs, or *cirri*, that scoop food into its mouth.

Although barnacles thrive and multiply in warmer waters, they survive long visits to regions of comparative cold. Species peculiar to several regions may be found on a vessel at the end of a world cruise. These crustaceans even survive travel through such freshwater passages as the Panama Canal. Tiny fish have spread from one ocean to another by lodging in the shells of dead barnacles attached to ships.

Fishermen of Spain and Brittany gather long-necked native types in clusters, boil them in salt water, and eat them with gusto. Charles Darwin, the English naturalist, noted a large Chilean species esteemed locally as food. The Japanese have long used barnacles for fertilizer.

UMI

Since early days, Tripoli has owed its commercial importance to caravan routes. Three timeless camel trails (from Timbuktu, Lake Chad, and the Darfur) cross the Sahara and converge on the city. It is a "port" for the sea of sand to the south as well as for the Mediterranean Sea on the north. It occupies the narrow, fertile strand between the two.

NOTE: Tripoli may be located on the National Geographic Society's map of Africa.

For additional information, see "Americans on the Barbary Coast," in the July, 1943, issue of the *National Geographic Magazine;* and "Old-New Battle Grounds of Egypt and Libia," December, 1940.

BARON FROM BLACK STAR

BRIGHTLY UNIFORMED NATIVE TROOPS PARADE ALONG TRIPOLI'S PALM-COOLED WATERFRONT

This is the "new city" section of the ancient Mediterranean port. During their rule of three decades, the Italians more than doubled the size of the city and improved its harbor. The tower in the background is part of a casino built before World War II.

The following order form may be used (or copied) for requesting the BULLETINS: School Service Department, National Geographic Society, Washington 6, D. C.

Kindly send_____copies of the GEOGRAPHIC SCHOOL BULLETINS weekly for one school year for classroom use to

Name_____

Address for sending BULLETINS_____

City_____State_____

I enclose, for each subscription, 25 cents (in United States or its possessions; in Canada, 50 cents in U. S. funds): Total amount_____

Bulletin No. 5, February 9, 1948

Korea's Wait for Freedom a Restless Period

DIVISION of Korea between the occupying forces of the United States and the Soviet Union, pending settlement of the country's independence, is causing continuous restlessness and precipitating border riots. The northern half—the Russian zone—is the industrial section of the country, and the southern—the United States zone—the agricultural half.

Korea has a personality of its own despite many centuries as a buffer between China and Japan, and despite today's arbitrary division.

Koreans Had Movable Type before Columbus's Day

A distinctive Korean civilization flourished at least 3,000 years ago in the big peninsula south of Manchuria. It came originally through the Chinese, who at various times have controlled the region. But it was developed along individual lines of arts and skills.

Korean astronomers studied the stars from an observatory a century before the birth of Christ. They invented a simplified alphabet, and perfected movable metal type long before Columbus set out for the New World.

In the late 1500's, when the Japanese attempted to invade the country, Koreans met them with "bombs" and ironclad warships. These then-unknown weapons filled the would-be conquerors with terror and helped drive them back to their island kingdom. Korean culture was an old story, however, for it was by way of the peninsula that much of Japan's learning had come from continental Asia.

A later attempt at conquest succeeded when Japan took over in 1910. The 35-year occupation did little to change the manners and customs of the Koreans. Because of their independence and high spirits, they have been called "the Irish of the East." A lively imagination peoples their ruggedly beautiful country with all sorts of dragons, and good and evil spirits. Korean place names include such descriptive word pictures as "Hill of Joy," "Heaven-Reaching Summit," and "Mountain of Lasting Peace."

Housefurnishings Are Simple

Although less prevalent now, one may still see the traditional marriage topknot through the transparent plug hat tied under a gentleman's chin. Many women and some old-fashioned men wear the old starched and voluminous costumes of white—originally the national mourning color. The ancient custom means extra hours of toil for the women of the family, who do the laundry out of doors (illustration, inside cover).

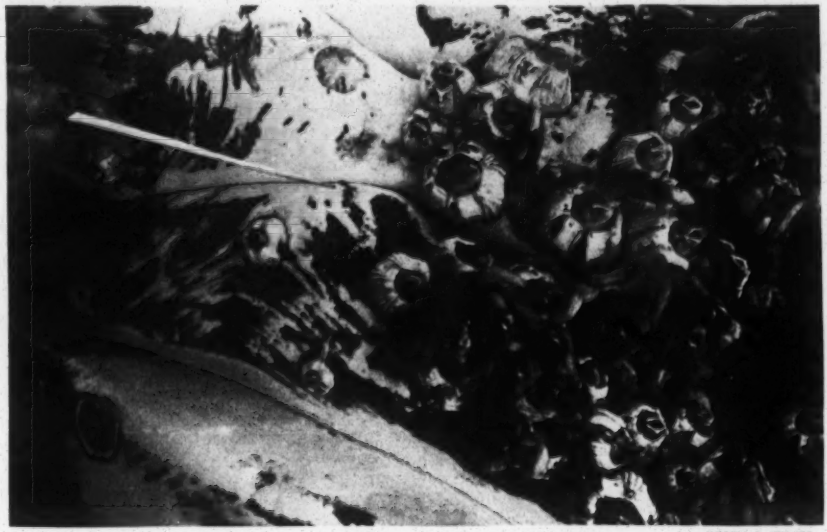
There is little furniture in Korean homes. Food is served on small, low tables. Sometimes a thick tiger skin serves as a soft sleeping rug. The wooden pillow (illustration, next page) would be hard going for the feather-conditioned heads of Westerners.

The status of Korean women is somewhat higher than in many other Oriental countries. After Allied liberation, a number of women's organizations were formed. Old social and religious customs, however, forbid Korean girls to have any association with American or Russian soldiers.

Known as the Hermit Kingdom because for centuries its people

The barnacle may have gotten its name from northern Europe's barnacle goose, whose Arctic nesting places were unknown during the Middle Ages. The myth arose that this bird "hatched" from the shell-like fruit of a tree growing along distant seashores. This fruit became associated in medieval minds with barnacles of the *Lepas* type, and the name of the goose that supposedly developed from the shell-covered "egg" was transferred to the marine growth.

NOTE: For additional information on marine "wild life", see "Where Nature Runs Riot," in the *National Geographic Magazine* for June, 1940; "On the Bottom of a South Sea Pearl Lagoon," September, 1938*; "Denizens of Our Warm Atlantic Waters," February, 1937; "Half Mile Down," December, 1934; and "Depths of the Sea," January, 1932.



MORRIS D. MILLER

BARNACLES, SALT-WATER HITCHHIKERS, SOMETIMES "LATCH ON" TO WHALES INSTEAD OF SHIPS

These rosebudlike creatures, an inch or more in diameter, clutter the bottom of a humpback whale. They attach themselves with a cement that solidifies into a shell-like hardness. Whales thus infested have been seen swimming in shallow water, trying to scrape off the free-riding Jonahs.

SESAME, OIL OF MANY USES, HARD TO HARVEST

Open, sesame—but not until the harvest is done! If the sesame seed pod would respond to Ali Baba's password, and at the time he demands, botanists believe that the United States could produce all it needs of a versatile vegetable oil now imported.

Sesame oil is pressed from the seed of *Sesamum indicum*, a plant cultivated since antiquity in the Orient. Mexico leads the Latin American republics in sesame culture. Sesame grows like a weed in parts of the southern United States, but because the seed pods open when they will, farmers see no profit in growing sesame commercially. If the crop is cut when pods low on the stalk are ripe, those at the top are green. By the time the pods at the top are ripe, the lower ones will have opened and spilled their seeds. Botanists hope to develop a sesame plant with pods which will stay closed, or hold their seeds after opening. Meanwhile, seed is collected by hand.

When pressed, the seeds yield half their weight in oil. The pressed cake makes feed for livestock. The oil serves nearly all the uses of coconut and olive oils. It is used in salads and cooking, in margarine and shortening, in soaps and cosmetics, pharmaceuticals and perfumes.

Mexico, increasing sesame culture when World War II cut off Eastern imports, is now Number One source for the United States.

remained isolated from the rest of the world, Korea continued in relative obscurity under Japan. Tours of the country were carefully guided trips to see what Japan wished to have displayed.

Korea's natural resources, including gold, iron, and coal, will be of great help in re-establishing the country as an independent nation. Copper, nickel, and other minerals, together with enormous possibilities in water power, are available for development of Korean industries.

Meanwhile, more than three-fourths of Korea's 25,000,000 people still make a living by farming. In a mountainous land, often with primitive implements, the Koreans produce large quantities of rice, millet, fruit, vegetables, cotton, and tobacco. The farmers work both irrigated-paddy and dry rice fields, producing a small, dry species even in the highlands.

Seoul (Keijo to the Japanese), the centrally located capital, had a population of nearly a million in 1940. Its modern Western-style hotel was one of the exhibits on a Jap-conducted tour of the city. Streetcars, modern commercial buildings, and wide streets give it an Occidental appearance. In contrast, narrow alleys lead by winding routes to houses whose low stone walls enclose picturesque Oriental courtyards.

NOTE: Korea appears on the Society's map of Japan and Korea.

See also, "With the U. S. Navy in Korea," in the *National Geographic Magazine*, June, 1947; "Jap Rule in the Hermit Kingdom," October, 1945*; and "Chosen, Land of Morning Calm," October, 1933; and, in the GEOGRAPHIC SCHOOL BULLETINS, February 17, 1947, see "Occupied Korea a Land of Rice Farmers."

WILLARD PRICE

A "SOFT" PINE PILLOW SUPPORTS A KOREAN'S HEAD THE HARD WAY

As far as this placidly sleeping Korean is concerned, his pillow—a block of soft pine—lives up to its name. The firm surface has little appeal to Western heads, whose ears may be less durable.